

subject is detected and a total energy of not less than two respective signals substantially simultaneously output from not less than two semiconductor cells falls in a predetermined energy window;

a position calculation circuit that calculates an incidence position based on positions of said not less than two semiconductor cells;

a counting circuit configured to count the specific event in association with the calculated incidence position; and

a circuit configured to generate a distribution of radio-isotope in the subject on the basis of a counting result.

2. (Twice Amended) An apparatus according to claim 1, wherein said position calculation circuit calculates the incidence position based on a position selected from the positions of said not less than two semiconductor cells.

3. (Twice Amended) An apparatus according to claim 2, wherein said position calculation circuit compares respective energies of the not less than two respective signals in order to select the position.

4. (Twice Amended) An apparatus according to claim 3, wherein said position calculation circuit selects, from the positions of said not less than two semiconductor cells, the position of one semiconductor cell that outputs a signal representing a minimum energy.

5. (Twice Amended) An apparatus according to claim 3, wherein said position calculation circuit selects the positions of one of said not less than two semiconductor cells based on the respective energies of the not less than two respective signals.

6. (Twice Amended) An apparatus according to claim 3, wherein said position calculation circuit selects, from the positions of said not less than two semiconductor cells, the position of one semiconductor cell that outputs a signal representing a minimum energy

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in a first area, and the position of one semiconductor cell that outputs a signal representing a maximum energy in a second area.

C2
8. (Twice Amended) An apparatus according to claim 1, wherein said selection circuit is configured to calculate time differences between a signal output from one of said plurality of semiconductor cells and signals output from remaining cells of said plurality of semiconductor cells.

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22. (Twice Amended) A method for generating a distribution of a radio-isotope in a subject with a nuclear medical diagnostic apparatus including a radiation detector in a form of a single layer, the radiation detector having a plurality of semiconductor cells arranged in a matrix, comprising:

detecting radiation derived from the radio-isotope with the plurality of semiconductor cells that output respective signals;

comparing a total energy of not less than two respective signals output from not less than two semiconductor cells with a predetermined energy window; and

calculating an incident position of the radiation based on a position of only one of the not less than two respective signals output from the not less than two semiconductor cells.

REMARKS

Favorable reconsideration of this application, as presently amended and in light of the following discussion, is respectfully requested.

Claims 1-6, 8, and 22 are presently active. Claims 7 and 9-17 have been cancelled without prejudice; and Claims 1-6, 8, and 22 have been amended by the present amendment. The changes to the claims are supported by the originally filed specification and do not add new matter.